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United States General Accounting Office

GAO

Report to the Honorable Bruce A. Morrison, House of Representatives

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CONNECTICUT'S ELIGIBILITY SYSTEM

Improving System Availability

GAO/IMTEC-90-55

GAO

United States
General Accounting Office
Washington, D.C. 20548

Information Management and
Technology Division

B-239261

May 11, 1990

The Honorable Bruce A. Morrison
House of Representatives

Dear Mr. Morrison:

In response to your January 16, 1990, request, we reviewed the State of Connecticut's progress in installing a new $27-million Eligibility Management System. This system enables state employees, using computer terminals, to access Connecticut's mainframe computer to process welfare applications and maintain welfare client information. You were concerned that federal tax dollars may have been wasted on this system, and asked us to determine why the system was nonfunctional for about 70 hours in December 1989. Detailed information on our scope and methodology is included in appendix I.

Results in Brief

In May 1989, as part of a phased deployment, Connecticut began to install its Eligibility Management System. After successfully completing initial tests, the system was installed in 8 of the state's 14 district offices. After the system operated successfully in these district offices, Connecticut officials decided to deploy the system statewide. In December 1989, when the system was installed in all district offices, it experienced software problems resulting in 71 hours of time when the system was scheduled to support on-line users but was not available for their use. Connecticut is correcting the software problems and system on-line availability is improving—hours of on-line unavailability were reduced to 25 in March 1990. However, Connecticut is withholding $2.8 million in payments to the contractor until all software problems are solved. Connecticut expects to accept the system from the contractor in May 1990. Since the federal government will pay 70 percent of the system's cost, it will make a final review of the system in the summer of 1990 to determine compliance with federal program and technical requirements for federal certification.

Background

In 1985, the State of Connecticut decided to install a new automated eligibility management system to support federally funded programs operated by its Department of Income Maintenance. The reason for acquiring the system was to improve program management, and help the Department of Income Maintenance serve welfare clients more efficiently and effectively. The system is used to help determine welfare eligibility and

disburse over $1.5 billion annually in benefits including Medicaid benefits, food stamps, and cash assistance to about 210,000 people. The system is expected to cost $27 million for development and implementation, with 70 percent paid by the federal government. The $27 million includes software being developed under a $10.4 million contract.

The U.S. Departments of Health and Human Services and Agriculture have participated in funding of the system. The Social Security Disability Amendments of 1980 (P.L. 96-265) provide funding for up to 90 percent of the planning, design, development, and installation of statewide automated claims processing and information retrieval systems to provide more efficient, economical, and effective administration of federally supported medical assistance and social services programs. Also, the Food Stamp Act Amendments of 1980 (P.L. 96-249) provide for up to 75 percent funding for automated systems. To receive federal funds, the system is required to meet federal program requirements for the specific federal programs that the system serves, and the system must meet specific data processing technical requirements. Both the Departments of Health and Human Services and Agriculture are responsible for reviewing and approving the system when installation and testing are complete.

Connecticut's Progress in Installing the New System

Development work on the new system began in August 1986 and was completed in March 1989. Implementation of the system began on May 1, 1989, one year later than expected, because of contractor problems with developing and testing software.

A phased deployment began with a test of a select number of welfare client cases. After successful completion of this test, Connecticut installed the system at one of its district offices. According to Connecticut officials, installing the system in a production environment at one district office allowed it to identify and correct any deficiencies before installing the system at other district offices. By October 1, 1989, the system was installed in 8 of the 14 district offices, which represent about 50 percent of Connecticut's welfare client caseload. During this time, Connecticut conducted acceptance tests to assess the software's conformance with specifications, the system's reliability, and the system's performance (ability to process a certain work load in a given period of time). Since these tests were successful, Connecticut officials decided to deploy the system statewide in December 1989.

Software Problems Reduced System Availability

In December 1989, when all of Connecticut's district offices and welfare client cases were added to the system, the availability problem appeared. During the day, the system is used to process welfare applications. At night, it is used to process welfare payments and produce management reports. Connecticut officials expected the system to be available about 10 hours each work day. Because of inefficiently written software, increased time is needed to process the evening work load, which makes the system unavailable for use during various periods of time each day. When this happens, activities such as processing new benefits or accessing and updating information in client files cannot be performed.

During a total of 71 hours in December the system was not available to process new benefits or access and update information in client files. Data compiled by the Department of Income Maintenance show that poorly written software accounted for 52 of the hours. These hours had been intended for processing welfare applications but were used to complete the processing of the evening work load. Connecticut did not become aware of the problem until all welfare client information was loaded on to the system. When departmental computer programmers reviewed the contractor-supplied software they found that it contained too many processing steps and required several unnecessary calculations, which increased the time needed to process the evening work load. In addition, Connecticut officials did not expect to have to take the system off-line to install, test, and service new software programs. The remaining 19 hours of on-line unavailability are attributable to this activity.

Our review of system availability reports for March 1990 showed improvement in the hours of on-line availability. In March, the system was not available for a total of 25 hours, 19 of which were attributed to inefficient software and 6 to new software programs being installed and tested. These figures mean that availability of the system increased from 63 percent to 88 percent during this period.

The improvement in system availability came about because some of the inefficient software programs were redesigned. Connecticut expects further improvement in on-line system availability when more of the inefficient software programs are redesigned, and it no longer has to take the system off-line to install and test programs.

State and Federal Actions

Connecticut's Commissioner for Income Maintenance has stated that Connecticut plans not to accept the system until the contractor resolves outstanding software problems. As of February 28, 1990, Connecticut was withholding about $2.8 million of the $10.4 million in payments to the contractor pending correction of these problems. The Commissioner said that Connecticut expects the problems to be solved and the system fully accepted in May 1990.

Both the Departments of Health and Human Services and Agriculture are monitoring the installation of the system in Connecticut. These departments are responsible for reviewing and approving the system when installation and testing are complete. Their final review begins when the state accepts the system from the contractor and requests a certification review. This review will determine if the system can be certified as meeting specific federal system criteria for the uniform administration and operation of welfare programs, and is qualified for federal funds. Connecticut expects to request a federal certification review for the system during the summer of 1990.

Conclusions

While Connecticut did encounter some unexpected software problems during the installation of this system, state officials have identified the problems and have taken prompt action to ensure that funds are not fully spent until the system is working. Also, upon acceptance of the system from the contractor, Connecticut will request a federal certification review.

We discussed the facts presented in this report with officials from the Department of Health and Human Services, the Department of Agriculture, and Connecticut's Department of Income Maintenance during the course of our work, and have incorporated their views where appropriate. We did not obtain official agency comments on a draft of this report. Detailed information on our objectives, scope, and methodology is presented in appendix I.

As arranged with your office, unless you publicly announce the contents of this report earlier, we plan no further distribution until 30 days after its issue date. At that time we will send copies to the Secretary of Health and Human Services; the Commissioner of Social Security; the Secretary of Agriculture; the Director, Office of Management and Budget; the Commissioner of Income Maintenance; and other interested parties. This report was prepared under the direction of Daniel C. White, Special

Assistant to the Assistant Comptroller General, who can be reached at (202) 275-4659. Other major contributors are listed in appendix II.

Sincerely yours,

for Ralph V. Carlone
Assistant Comptroller General

Objectives, Scope, and Methodology

Our objectives were to determine the reasons why Connecticut's new Eligibility Management System was experiencing problems in December 1989, and to determine the actions being taken to solve these problems. Our review was conducted from January 1990 to April 1990, at the Departments of Health and Human Services and Agriculture in Washington, D.C., and the State of Connecticut's Department of Income Maintenance headquarters in Hartford, Connecticut, in accordance with generally accepted government auditing standards.

We reviewed the Departments of Agriculture and Health and Human Services regulations and guidelines on how states may plan, design, and operate an automated statewide management information system that qualifies for federal funds. To determine the extent to which Connecticut's Eligibility Management System is operational, we obtained the Health and Human Services' evaluation methodology, which is used to review state-developed automated systems that request federal funding. This methodology is designed to help assure that all functional requirements are examined, are determined to be operational, and are performed efficiently and effectively.

To find out how well the new system met its availability goal since December 1989 when it became operational statewide, we analyzed issues of the Daily Eligibility Management System Processing Report, prepared monthly by the Department of Income Maintenance, that show the average daily hours scheduled, the average daily on-line unavailability, and the system's availability calculated as a percentage of scheduled hours. Using data compiled by the Department of Income Maintenance, we calculated the number of hours the new system was available. We then computed system availability by dividing the number of hours the system was operational by the number of hours it was scheduled to be operational. To determine why the system did not meet its availability goal on a given day, we reviewed functional problem reports prepared daily by the Department of Income Maintenance, which show the reasons why the system is not available.

To determine the extent to which problems affecting system availability have been corrected, we analyzed state-compiled data to identify the number and types of problems that have affected the new system's availability. We also obtained supporting documentation and interviewed state personnel responsible for implementing the system. We examined the approach the state is using to correct problems with the system. We also conducted on-site visits during February and March to

observe the system in operation. We evaluated the effectiveness of controls that the state uses to ensure that the problems affecting system availability are corrected.

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